REMARKS

The Office Action of October 24, 2001, has been carefully considered.

It is noted that a new title is required.

The drawings are objected to under 37 CFR 1.84(p)(5).

Claims 1-4 are rejected under 35 USC 103(a) over Shioda, et al. in view of Snider, et al.

In connection with the Examiner's requirement for a new title applicant has cancelled the original title and presented a new title which is believed to be more clearly indicative of the invention to which the claims are directed.

In view of the Examiner's objection to the drawings applicant has enclosed herewith a Letter With Proposed Changes in which Figure 4 is proposed to be changed to correct reference numeral "14'" to now be --14--. It is respectfully submitted that the no new matter is added by this change. Upon approval of this change and the determination of allowable subject matter applicant will attend to making corresponding changes to the formal drawings.

In view of these considerations it is respectfully submitted that the objection to the drawings is overcome and should be withdrawn.

In view of the Examiner's rejections of the claims applicant has amended independent claim 1.

It is respectfully submitted that the claims now on file differ essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references.

Turning now to the references, and particularly to the reference to Shioda, et al., it can be seen that this reference discloses a system for eliminating "corona" or arcing between a stator winding of a multi-phase, multi-slot electric motor and the laminated body of the stator itself. This arcing, over time, destroys the insulation between the winding and the stator resulting in a short circuit and failure of the winding, Shioda, et al. do not discuss the reduction or elimination of circulating currents which increase bearing light, as in the presently claimed invention. Applicant respectfully submits that one skilled in the art would not turn to the teachings of Shioda, et al. for solving the problem of bearing damage due to circulating motor currents. This is the problem addressed by the presently claimed invention. Shioda, et al. teach "an insulating layer 4 insulated to the ground formed on a conductor and a semi-conductive surface corona-preventive layer 5". The conductor referred to is clearly part of the motor winding housing itself as can be seen in Figure 1 of Shioda, et al. The insulating layer 4 is placed onto a conductor 6 that surrounds the winding 3. The description clarifies that the active part of the shield is the semi-conductive surface layer, which, using other terminology more applicable to its function, can also be described as a semi-insulating layer. A semi-insulating layer would be totally unsuitable for conducting the high frequency capacitive current which lead to bearing failure, the suppression of which is the aim of the presently claimed invention. In Shioda, et al. the conductor is a standard part of the motor and not part of the shield whereas in the presently claimed invention a conducting shield is an essential part of the invention. Therefore, the teachings of Shioda, et al. are not usable for solving the problems address in the presently claimed invention. In other words, it would not be obvious to one skilled in the art to replace the semi-

conductive layer of Shioda, et al. with a conductive layer in order to reduce the amplitudes of the capacitive current circulating in the stator body, as recited in the presently claimed invention.

Additionally, since Shioda, et al. are not concerned with the capacitively coupled currents which flow through the laminated body of the stator and which induce further currents in the rotor shaft, they do not teach grounding of the slot shield at the current head side of the winding, as in the presently claimed invention. This grounding of the shield results in a minimization of the path through the laminator stator body along which the current capacitive currents must flow in order to return to their source, the three-phase voltage/current supply connection point. The presently claimed invention does not eliminate the capacitively coupled currents but rather employs a conductive shield in order to redirect their flow so as to prevent the currents from circulating through the body of the motor. It is believed clear that if the magnitude of the currents is not changed then the path through which they flow must be changed in order to achieve any physical effect. The grounding point of the shield with respect to the current-feed point is thus crucial to the effectiveness of the invention.

The patent to Snider, et al. discloses a leadless motor construction. Snider, et al. only concern themselves with improving the manufacturability of a dynamoelectric machine and its cost by reducing the number of connections to the motor. Snider, et al. do not claim or discuss any electrical or electromagnetic benefits and there is nothing in the disclosure of this reference which would lead one skilled in the art to believe that placing the shield ground connection on the converter fed side of the winding would in any way lead to a reduction in the high frequency capacitive currents flowing in the rotor shaft.

The Examiner combined these references in determining that claims 1-4 would be unpatentable over such a combination. It is respectfully submitted that there is nothing in the teachings of these references which would suggest utilizing the teachings of Snider, et al. for modifying the apparatus of Shioda, et al. Furthermore, since neither of the references deal with preventing bearing damage due to circulating currents, a combination of these references also provides no teaching concerning a construction of a motor which addresses these bearing damage problems.

Thus, it is respectfully submitted that the combination of references does not teach a three-phase converter fed motor having an electrically conductive shield arranged so as to shield each slot in the stator and which shield is grounded to the laminated core of the stator only on the current fed side of the winding so that amplitudes of capacitive currents circulating in the stator are reduced and thereby avoiding damage to the bearing, as in the presently claimed invention.

In view of these considerations it is respectfully submitted that the rejection of claims 1-4 under 35 USC 103(a) over a combination of the above-discussed references is overcome and should be withdrawn.

Reconsideration and allowance of the present application are respectfully requested.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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Dated: April 24, 2002

In the Claims:

1. (Amended) A three phase converter fed motor, comprising:

a shaft;

a stator having a laminated core, a winding and a plurality of slots, the winding having a current fed side, the stator being operatively connectable to a three phase-current via the winding;

a shield comprising an electrically conductive layer, the shield being operatively arranged between the current fed side of the winding and the laminated core so as to shield each slot, the shield being one of grounded and conductively connected to the laminated core only on the current fed side of the winding whereby amplitudes of capacitive currents circulating in the stator are reduced;

first insulating means operatively arranged between the shield and the winding for insulating the shield from the winding; and

second insulating means operatively arranged between the shield and the laminated core for insulating the shield from the laminated core.